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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,795	02/10/2004	Richard Heinen	DN2004013	9693

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THE GOODYEAR TIRE & RUBBER COMPANY
INTELLECTUAL PROPERTY DEPARTMENT 823
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EXAMINER

MAKI, STEVEN D

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/775,795

Applicant(s)

HEINEN, RICHARD

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Europe 456 (tetragon blocks on EP)

2) **Claims 1, 5, 10-12, 15-16 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 456 (EP 890456) in view of at least one of Japan 207 (JP 6-135207), Cesarini et al (WO 00/30874) and Iwamura et al (US 6109317).**

The references Europe 456, Japan 207, Cesarini et al and Iwamura et al are applied as in paragraph 2 of the last office action dated 4-5-06 (paragraph 2 is incorporated herein by reference).

Applicant argues that the unwritten presumption is that if the grooves of Europe 456 were modified to have a greater length, the blocks would then have a length within applicant's recited range. Applicant is incorrect. The obviousness issue is what length **the footprint** of Europe 456's tire should have. No modification of the length of Europe 456's grooves is necessary. All of applicant's arguments attack the secondary references individually. None of applicant's arguments address the issue of the length of the footprint of Europe 456's tire. In particular, none of applicant's arguments describe the length of the footprint of Europe 456's tire. Europe 456's tire, like all tires, has a footprint. The footprint is contact area between the tire and the road. The last office action stated: "... it would have been obvious to one of ordinary skill in the art to

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provide Europe 456's tire *with a footprint ...*" (emphasis in original) instead of --it would have been obvious to increase the length of Europe 456's grooves--.

Applicant recognizes that Europe 456's tire has a footprint. Applicant states: "But this is not the case with the tread of EP '456 which teaches the formation of isolated blocks having interconnecting means to move water from the footprint." (emphasis added, page 4 last three lines of response filed 7-17-06). The examiner agrees with applicant that one of ordinary skill in the art would readily appreciate that Europe 456's tire has a footprint and that the grooves in Europe 456's tread are used to move water from the footprint. This means that Europe 456's tread must have grooves which communicate with the peripheral edge of the footprint.

What is the length of the footprint of Europe 456's tire? The answer to this question might be obtained by actually manufacturing Europe 456's tire. Alternatively, the answer to this question can and should be obtained from the prior art's teachings relating to the footprint of a tire.

Europe 456's tire tread, like many tire treads, comprises circumferential grooves and lateral grooves. Europe 456's tread also has specialized grooves. The specialized grooves are the steeply slant grooves 2. These steeply slant grooves 2 are unique in that, although they have a substantially longer circumferential length compared to the lateral grooves (gently slanted grooves 3), they do not extend completely around the tire circumference as do the circumferential grooves, which necessarily communicate with the peripheral edge of the footprint of the tire.

Europe 456's tire tread has steeply slanted grooves and, as acknowledged by applicant, grooves which moves water from the footprint. When using steeply slant grooves 26 in a central area of the tread, Japan 207 teaches providing the footprint of the tire such that the steeply slant groove extends completely across the length of the footprint (figure 1). When using steeply slant grooves in a central area of the tread, Cesarini et al teaches providing the footprint such that the steeply slant groove S extend completely across the length of the footprint (figure 2). The benefit of having such a footprint is allowing water to be able to drain the water under the tire footprint, or in applicant's words, to move water from the footprint. When using steeply slant grooves 2, Iwamura et al teaches providing the footprint of the tire such that a steeply slant groove extends completely across the length of the footprint (figure 3).

The specific tread pattern of the secondary art, as mentioned by applicant, contain differences from Europe 456's tread pattern. The constant teaching within each of these references is that when using a steeply slant groove, the footprint of the tire must be provided such that a steeply slant groove extends completely across the length of the footprint. The applied prior art when considered as a whole **teaches toward** providing the footprint of Europe 456's tire such that a steeply slant groove 2 of Europe 456 extends completely across the length of the footprint. The applied prior art when considered as a whole **teaches against** providing the footprint of Europe 456's tire such that the footprint is devoid of a steeply slant groove extending completely across the length of the footprint. When Europe 456's tire has footprint in which a steeply slant groove 2 extends completely across the footprint, the length of the block 4 adjacent to

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the slant groove 2 also extends completely across the footprint since the elongated blocks 4 are longer than the steeply slant grooves 2. This arrangement is consistent with Europe 456's recommendation to provide each of the blocks with a "relatively large circumferential component" (col. 6 lines 43-46).

Applicant comments and the examiner agrees that each of the references provide a tire for use on wet roads. The examiner adds that each of the references have steeply slant grooves.

Applicant argues that Japan 207 provides no specific teaching as why groove 26 must have a length greater than the footprint length. One of ordinary skill in the art would readily understand that steeply slant groove 26 has a length longer than the footprint as shown in figure 1 to drain water from the footprint. This conclusion is supported by evidence. See figure 2 and discussion thereof in Cesarini et al.

Applicant comments on Japan 207's teaching to incline block edges 23L, 24L and the width of the center rib block being 53%. More properly, Japan 207 shows providing a footprint as shown in figure 1. The left side of this figure 1 footprint (and also the left side of the prior art figure 3 footprint) includes three shoulder lateral grooves. When Europe 456's tire is provided with a footprint demonstrating only three shoulder lateral grooves on one side, the block 4 has a length longer than the footprint length. Compare the shoulder lateral grooves 3 of Europe 456 with the number of shoulder grooves in Japan 207's figure 1 footprint.

Applicant argues that Cesarini must have no circumferential grooves. The examiner acknowledges that Cesarini teaches a tread having no circumferential

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grooves. However, Cesarini informs one of ordinary skill in the art that water can be drained from a steeply slant groove when that groove extends completely across the length of the footprint and thereby undercuts applicant's apparent argument that there is no reason for Japan 207's steeply slant groove to extend completely across the length of the footprint as shown in figure 1.

Applicant notes that Europe 456 already has means via the circumferential grooves that communicate with the lateral grooves to move water out of the footprint. Examiner notes that Japan 207, like Europe 456, discloses a tire tread having two main circumferential grooves and lateral grooves. Examiner adds that Japan 207 shows that even when such means are used, the footprint length is relatively short in that only a limited number of shoulder grooves appear in the footprint. When a limited number of shoulder grooves appear in Europe 456's figure 1 tread, then Europe 456's elongated blocks having a "relatively large circumferential component" have a circumferential length at least equal to the footprint length.

Applicant argues that Cesarini fails to teach forming blocks having a length greater than the footprint length and that there are no blocks in the central region of the tire of Iwamura. Examiner emphasizes that no matter what tread pattern is used (all blocks as in Japan 207, only shoulder blocks as in Iwamura et al, no blocks as in Cesarini), the footprint length should be relatively short so that a steeply slant groove extends completely across the footprint.

Applicant argues and examiner agrees that Iwamura teaches that six or more steeply slant grooves appear in the footprint. Examiner adds that Iwamura also shows

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three shoulder lateral grooves 4 on the left side of the footprint. When Europe 456's tire is provided with a footprint demonstrating only three shoulder lateral grooves on one side, the block 4 has a length longer than the footprint length. Compare the shoulder lateral grooves 3 of Europe 456 with the number of shoulder grooves 4 in Iwamura et al's figure 3 footprint.

Applicant argues that since every tire designer knows that a tire will be used on a wet surface at some point in the life of the tire, the fact of Japan 207, Cesarini et al and Iwamura all being directed to tires for use on wet roads is not sufficient motivation to combine the teachings of each, either individually or collectively, with EP 456. This argument is not persuasive. In addition to noting that Europe 456, Japan 207, Cesarini et al and Iwamura additionally share the common subject matter of having a steeply slant groove, examiner emphasizes that Europe 456's tire has a footprint and the applied prior art when considered individually or collectively motivate one of ordinary skill in the art to provide Europe 456's tire with a footprint such that Europe 456's steeply slant grooves 2 and Europe 456's elongated blocks 4 having a "relatively large circumferential component" extend completely across the footprint.

3) Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 456 in view of at least one of Japan 207, Cesarini et al and Iwamura et al as applied above and further in view of Japan 907 (JP 2-41907).

The reference Japan 907 is applied as in paragraph 3 of the last office action dated 4-5-06 (paragraph 3 is incorporated herein by reference).

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4) Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 456 in view of at least one of Japan 207, Cesarini et al and Iwamura et al as applied above and further in view of Nakagawa (US 6102093).

The reference Nakagawa is applied as in paragraph 4 of the last office action dated 4-5-06 (paragraph 4 is incorporated herein by reference).

Japan 413 (two columns of tetragon blocks)

5) Claims 1, 5-7, 11-12, 15-16, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 413 (JP 11-5413) in view of at least one of Japan 207, Cesarini et al and Iwamura et al.

The references Japan 413, Japan 207, Cesarini et al and Iwamura et al are applied as in paragraph 5 of the last office action dated 4-5-06 (paragraph 5 is incorporated herein by reference).

This rejection using Japan 413 is similar to the above rejection using Europe 456 in that (1) Japan 413 and Europe 456 teach elongated blocks separated by steeply slant grooves and (2) the secondary art is applied for their teachings as to the footprint that should be provided for a tire. This rejection using Japan 413 addresses dependent claims (e.g. claims 6 and 7) not addressed by the rejection using Europe 456.

Examiner's discussion of Japan 207, Cesarini et al and Iwamura et al in paragraph 2 of this office action is incorporated herein by reference.

Applicant argues that the unwritten presumption is that if the grooves of Japan 413 were modified to have a greater length, the blocks would then have a length within applicant's recited range. Applicant is incorrect. The obviousness issue is what length

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the footprint of Japan 413's tire should have. No modification of the length of Japan 413's grooves is necessary. All of applicant's arguments attack the secondary references individually. None of applicant's arguments address the issue of the length of the footprint of Japan 413's tire. In particular, none of applicant's arguments describe the length of the footprint of Japan 413's tire. Japan 413's tire, like all tires, has a footprint. The footprint is contact area between the tire and the road. The last office action stated: "... it would have been obvious to one of ordinary skill in the art to provide Japan 413's tire *with a footprint* ..." (emphasis in original) instead of --it would have been obvious to increase the length of Europe 456's grooves--.

Applicant's arguments as to the secondary art in this rejection using Japan 413 are not persuasive since the secondary art when considered as a whole **teaches toward** providing the footprint of Japan 413's tire such that a steeply slant groove 6 of Japan 413 extends completely across the length of the footprint.

With respect to Japan 207, applicant argues and examiner agrees that the slant grooves of Japan 413's two tread rows are not aligned. However, Japan 413 and Japan 207 have the same tread structure of shoulder blocks. Japan 207 shows four shoulder blocks in the footprint and Japan 413 teaches that the central blocks may have a length of 5 times the length of the shoulder blocks. These teachings suggest and point toward providing Japan 413's tire with a footprint such that the central block has a length at least equal to the footprint length.

6) **Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 413 in view of at least one of Japan 207, Cesarini et al and Iwamura et al as**

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applied above and further in view of German 574 (DE 614574) or Gerresheim et al (US Des. 414728).

The references German 574 and Gerresheim et al are applied as in paragraph 6 of the last office action dated 4-5-06 (paragraph 6 is incorporated herein by reference).

7) Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 413 in view of at least one of Japan 207, Cesarini et al and Iwamura et al as applied above and further in view of Himuro (US 6892775) or Boiocchi et al (US 5964266).

The references Himuro and Boiocchi et al are applied as in paragraph 7 of the last office action dated 4-5-06 (paragraph 7 is incorporated herein by reference).

8) Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 413 in view of at least one of Japan 207, Cesarini et al and Iwamura et al as applied above and further in view of Japan 508 (JP 2-179508).

The reference Japan 508 is applied as in paragraph 8 of the last office action dated 4-5-06 (paragraph 8 is incorporated herein by reference).

9) Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 413 in view of at least one of Japan 207, Cesarini et al and Iwamura et al as applied above and further in view of Japan 907 (JP 2-41907).

The reference Japan 907 is applied as in paragraph 9 of the last office action dated 4-5-06 (paragraph 9 is incorporated herein by reference).

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Remarks

10) Applicant's arguments filed 7-17-06 have been fully considered but they are not persuasive. Applicant's arguments are addressed above.

11) No claim is allowed.

12) **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

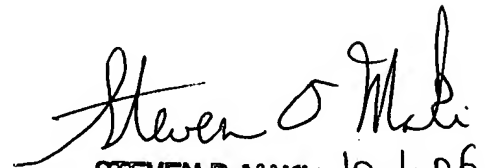
13) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
October 1, 2006


STEVEN D. MAKI 10-1-06
PRIMARY EXAMINER